

## ABSTRACT

A fuel cell system that extracts water from the effluent of a fuel cell for supply to other components of the fuel cell system that require water. A preferred embodiment is a fuel cell system, for the production of electricity from hydrogen gas and an oxidant, comprising:

- (a) a fuel cell comprising an anode input for a hydrogen-containing anode supply stream, a cathode input for an oxidant-containing cathode supply stream, and a cathode output for cathode effluent comprising water produced by said fuel cell; and
- (b) a water transfer device, connected to said fuel cell, that transfers water from said cathode effluent to said anode supply stream.